REMARKS

Claims 3, 4, 7, 9-11, 14, 17-18, 21, 25 and 28 have been amended. Claims 1-28 remain for further consideration. No new matter has been added.

The objections and rejections shall be taken up in the order presented in the Official Action.

1-3. Claims 9 and 10 currently stand rejected under 35 U.S.C. §112, second paragraph. Claims 9 and 10 have been amended to recite proper dependency.

4. The undersigned authorizes an Examiner's amendment to correct this typo.

5-10. Claims 15-19 and 21 currently stand rejected 35 U.S.C. §102(b) for allegedly being anticipated by the subject matter recited in U.S. Patent 4,081,710 to Heywood (hereinafter "Heywood").

Claim 15 recites *"[a]n electrode for use in a device that produces electrical discharges in an aqueous medium, said electrode comprising: a superalloy having a cobalt content greater than 8%."* (emphasis added, cl. 15). An aqueous medium is defined as a "of, like, or containing water; watery" The Random House College Dictionary, First Edition, 1984. Heywood discloses an igniter for use in gas turbine engines. As known, gas turbine engines inject a jet fuel/air mixture into a combustor, and the jet fuel/air mixture is ignited within the combustor. This jet fuel/air mixture is NOT an aqueous medium.

A 35 U.S.C. §102 rejection requires that a single piece of prior art disclose each and every feature of the claimed invention. It is respectfully submitted the Heywood is incapable of

anticipating the claimed invention since it fails to disclose that the electrodes produce discharges in an aqueous medium.

It is respectfully submitted that the rejection of claims 16-18 is moot since these claims depend either directly or indirectly from claim 15, which is patentable for at least the reasons set forth above.

Claim 19 recites *"[a]n electrode for use in a device that produces electrical discharges in an aqueous medium, said electrode comprising: a superalloy having a nickel content of greater than 8% by weight."* (emphasis added, cl. 19). As set forth above with respect to claim 15, Heywood discloses an igniter for use in gas turbine engines. As known, gas turbine engines inject a jet fuel/air mixture into a combustor, and the jet fuel/air mixture is ignited within the combustor. This jet fuel/air mixture is NOT an aqueous medium. As a result, it is respectfully submitted the Heywood is incapable of anticipating the claimed invention since it fails to disclose that the electrodes produce discharges in an aqueous medium.

11-12. Claims 22-25 currently stand rejected under 35 U.S.C. §102(b) for allegedly being anticipated by the subject matter recited in U.S. Patent 4,844,747 to Jachowski (hereinafter "Jachowski").

Claim 22 recites *"[a]n electrode for use in a device that produces electrical discharges in an aqueous medium, said electrode comprising: a thermal-worked steel having a vanadium content of greater than 0.05% by weight and a chromium content of greater than 1% by weight."* (emphasis added, cl. 22). Jachowski relates to the field of manufacturing rollers for use in a rolling mill (i.e., a steel rolling mill). Jachowski appears to use the term electrode in the context

of the material that is remelted in the water cooled mold illustrated in FIG. 3 of Jachowski. Jachowski states *"[i]mmediately after remelting of electrode 5, mold halves 11 and 12 are removed and still hot composite roll 1 is transported by means of a suitable conveying means (not shown) into a thermally insulated vessel (also not shown) and is there slowly cooled to room temperature." (col. 4, lines1-6).* Jachowski is clearly directed to a completely different field then the claimed invention - there is simply no relationship to a roll used in a rolling mill and an electrode for use in a device that produces electrical discharges in an aqueous medium as recited in claim 21. The roll of Jachowski is clearly not used to create electrical discharges in an aqueous medium.

14-16. Claims 26-28 currently stand rejected for allegedly being anticipated by the subject matter disclosed in U.S. Patent 6,200,440 to Moran (hereinafter "Moran")

Claim 26 recites *"[a]n electrode for use in a device that produces electrical discharges in an aqueous medium, said electrode comprising: stainless steel with a chromium content of greater than 12.5% by weight."* (emphasis added, cl. 1). Moran discloses an electrolysis cell and electrodes. As known, electrolysis involves the input of electrical energy as a direct current to force a nonspontaneous reaction to occur. An electrode in an electrolysis system is NOT configured and arranged to product electrical discharges as set forth in claim 26. A 35 U.S.C. §102(b) rejection requires that a single reference disclose each feature of the claimed invention. Moran clearly fails to disclose an electrode configured and arranged to product electrical discharges as set forth in claim 26, and as result Moran incapable of anticipating the subject matter of claim 26.

17-19. Claim 20 currently stands rejected for allegedly being obvious in view of Heywood

It is respectfully submitted that this rejection is now moot since claim 20 depends from claim 19, which is patentable for at least the reasons set forth above.

20-24. Claims 1-8 currently stand rejected for allegedly being obvious in view of the combined subject matter disclosed in Heywood and DE 3519163 (hereinafter "DE '163").

As set forth above, Heywood discloses an igniter for use in gas turbine engines. As known, gas turbine engines inject a jet fuel/air mixture into a combustor, and the jet fuel/air mixture is ignited within the combustor. This jet fuel/air mixture is NOT an aqueous medium. The Official Action recognizes that Heywood fails to disclose that the device disclosed creates pressure wave. It is then alleged that DE '163 discloses a system for generating shock waves for medical purposes. It is further alleged that a perform of ordinary skill at the time of the invention would have modified Heywood *"...to use the electrode composition in a device that produces pressure waves because of the desire to make pressure wave for medical purposes."* (Official Action, pg. 6). This rejection is improper for several reasons.

First, a prima facie case of obvious has not been established. *"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination."* In re Geiger, 2 U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987). *"Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, '[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.'"* In re Laskowski, 10 U.S.P.Q.2d 1397, 1398 (Fed. Cir. 1989), citing In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir.

1984). In addition, *"[w]hen the incentive to combine the teachings of the references is not readily apparent, it is the duty of the examiner to explain why the combination of the reference teachings is proper."* Ex parte Stone, 2 U.S.P.Q.2d 1788, 1790 (Bd.App. & Int'f 1986) (emphasis added).

As noted above, it is fundamental that obviousness can not be established absent some teaching to combine the references, or a suggestion or incentive supporting the combination of references. See In re Geiger, at 1278 (Fed. Cir. 1987). In the instant case the Official Action is lacking the necessary factual, non-conclusionary explanation why the combination of the Heywood and DE '163 is proper. The Official Action merely recited a wholly conclusionary statement that a skilled person would have been motivated to modify Heywood *"...to use the electrode composition in a device that produces pressure waves because of the desire to make pressure wave for medical purposes."* (Official Action, pg. 6). This rationale is completely conclusionary and fails to cite to any suggestion to combine in the prior art references themselves. Hence, it is respectfully submitted that a prima facia case of obviousness has not been presented since there is no proper teaching, suggestion or incentive that would lead one of ordinary skill in the art to modify Heywood based upon the teachings of DE '163 to create the claimed invention.

Second, the combination of the references is improper because if the references were combined as suggested to create the claimed invention Heywood would no longer work as an igniter for use in gas turbine engines. Therefore, the combination is clearly improper.

25-29. Claims 8-11currently stand rejected for allegedly being obvious in view of the combined subject matter disclosed in Jachowski and DE 3519163 (hereinafter "DE '163").

Jachowski relates to the field of manufacturing rollers for use in a rolling mill (i.e., a steel rolling mill). Jachowski appears to use the term electrode in the context of the material that is remelted in the water cooled mold illustrated in FIG. 3 of Jachowski. Jachowski states *"[i]mmediately after remelting of electrode 5, mold halves 11 and 12 are removed and still hot composite roll 1 is transported by means of a suitable conveying means (not shown) into a thermally insulated vessel (also not shown) and is there slowly cooled to room temperature." (col. 4, lines1-6).* Jachowski is clearly directed to a completely different field then the claimed invention - there is simply no relationship to a roll used in a rolling mill and an electrode for use in a device that produces electrical discharges in an aqueous medium as recited in claim 21. The roll of Jachowski is clearly not used to create electrical discharges in an aqueous medium. Again, this rejection is improper for several reasons.

First, a prima facie case of obviousness has not been established. This rationale is cited in the Official Action (see pg. 6, ¶ #28) is completely conclusionary and fails to cite to any suggestion to combine in the prior art references themselves. Hence, it is respectfully submitted that a prima facia case of obviousness has not been presented since there is no proper teaching, suggestion or incentive that would lead one of ordinary skill in the art to modify Jachowski based upon the teachings of DE '163 to create the claimed invention.

Second, the combination of the references is improper because if the references were combined as suggested to create the claimed invention Jachowski would no longer work as a roll for use in a rolling mill. Therefore, the combination is clearly improper.

30-34. Claims 12-14 currently stand rejected for allegedly being obvious in view of the combined subject matter disclosed in Moran and DE 3519163 (hereinafter "DE '163").

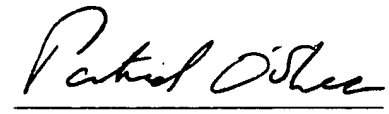
Again, this rejection is improper for several reasons. First, a prima facie case of obviousness has not been established. This rationale is cited in the Official Action is completely conclusionary and fails to cite to any suggestion to combine in the prior art references themselves. Hence, it is respectfully submitted that a prima facia case of obviousness has not been presented since there is no proper teaching, suggestion or incentive that would lead one of ordinary skill in the art to modify Moran based upon the teachings of DE '163 to create the claimed invention.

Second, the combination of the references is improper because if the references were combined as suggested to create the claimed invention Moran would no longer work as a electrolysis device. Therefore, the combination is clearly improper.

For all the foregoing reasons, reconsideration and allowance of claims 1-28 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,



Patrick J. O'Shea
Reg. No. 35,305
Gauthier & Connors, LLP
225 Franklin Street, Suite 3300
Boston, MA 02110
(617) 426-9180, Ext. 121